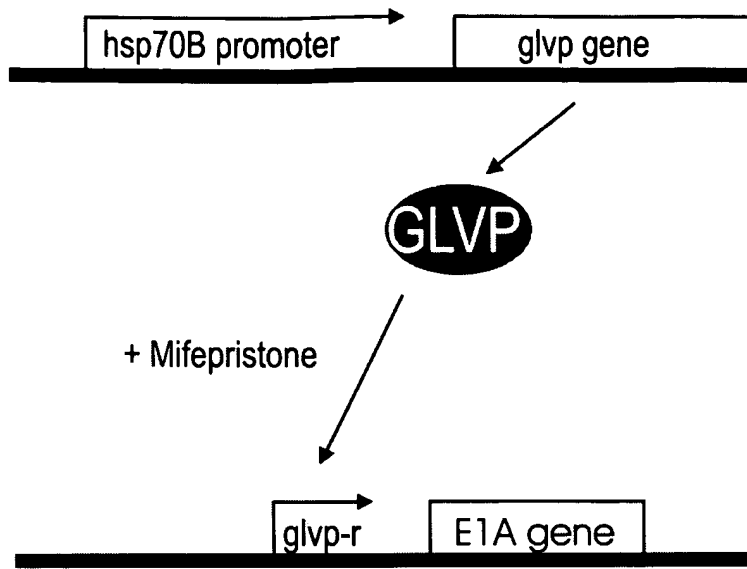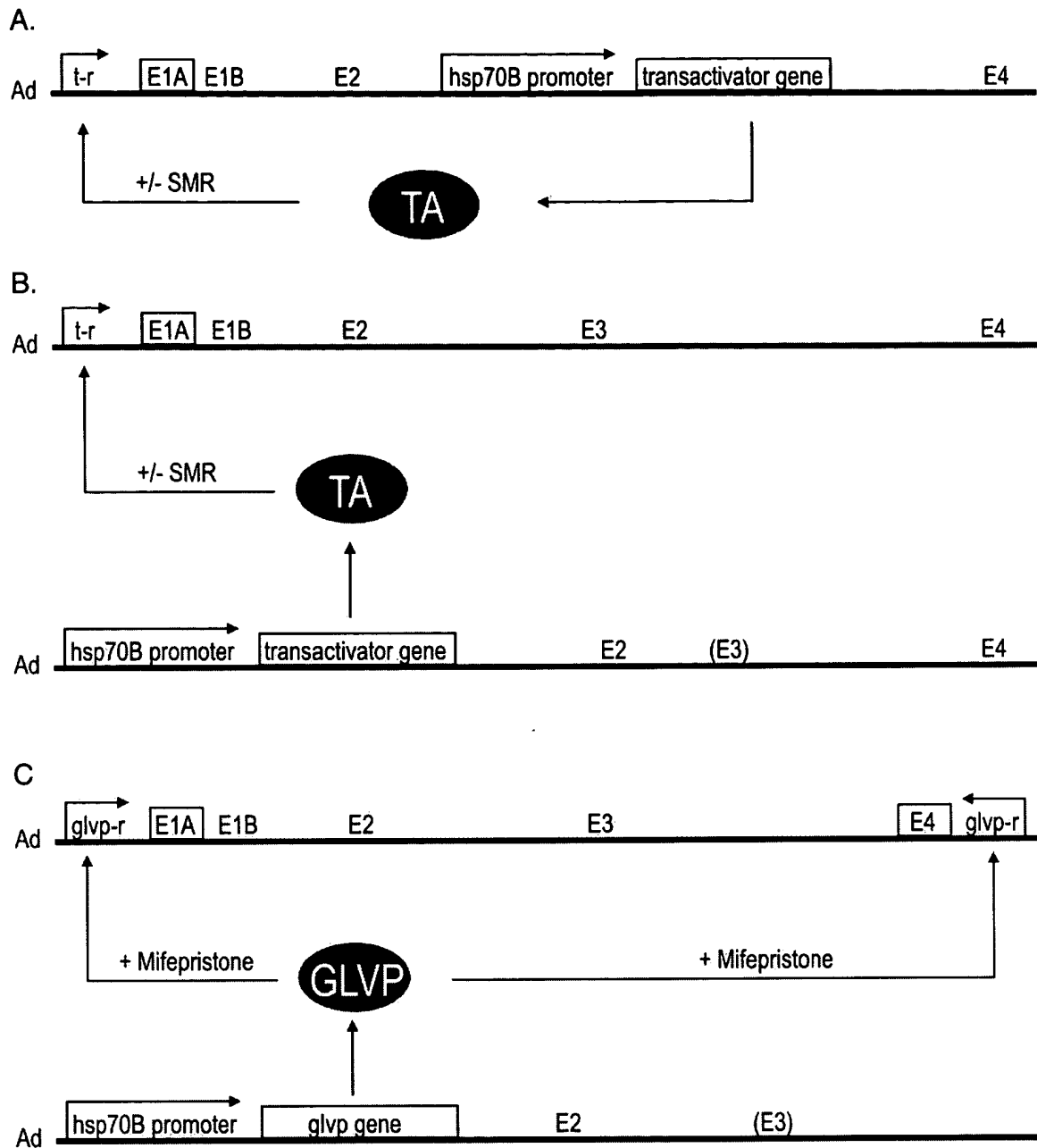TA   - transactivator protein
t-r   - transactivator-responsive promoter
SMR - small molecule regulator
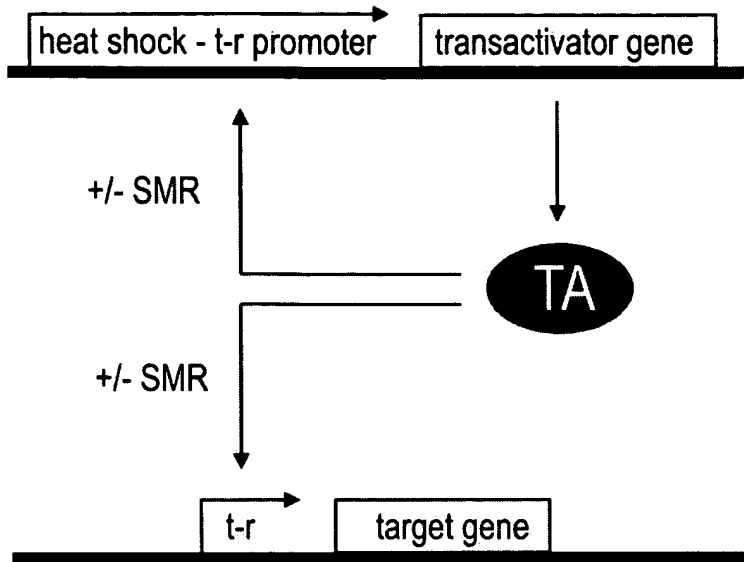
hsp70B promoter | glvp gene

GLVP

+ Mifepristone

glvp-r | E1A gene

glvp-r - GLVP-responsive promoter

A.

B.

C.

glvp-r - GLVP-responsive promoter
t-r   - transactivator-responsive promoter
SMR - small molecule regulator
TA   - transactivator protein
Ad   - adenovirus DNA
( )   - gene region from which sequences can be optionally deleted

A

heat shock - t-r promoter | transactivator gene

+/- SMR

+/- SMR

TA

t-r | target gene

B

hsp70B - glvp-r promoter | glvp gene

+ Mifepristone

+ Mifepristone

GLVP

glvp-r promoter | E1A gene
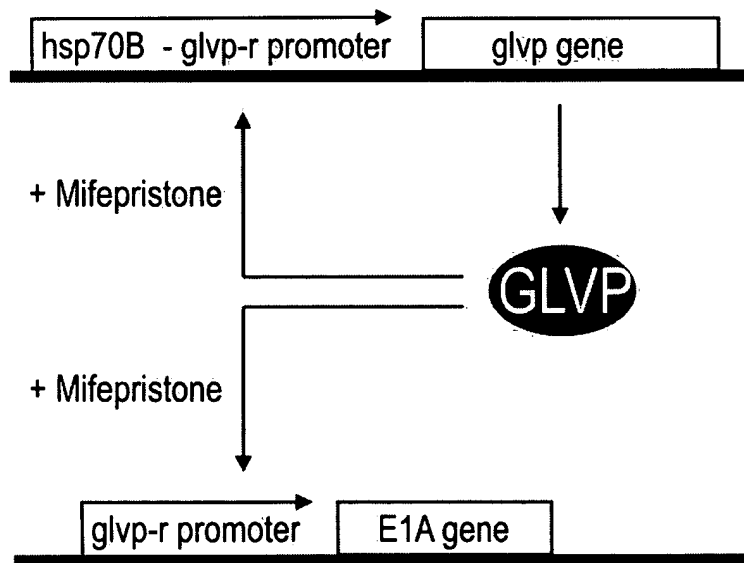
glvp-r - GLVP-responsive promoter
t-r   - transactivator-responsive promoter
SMR - small molecule regulator
TA   - transactivator protein
hsp70B - glvp-r promoter
heat shock - t-r promoter
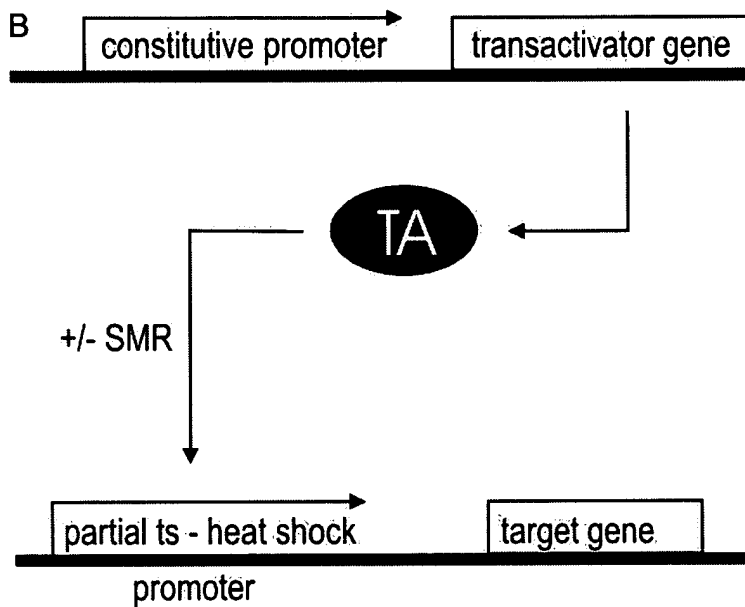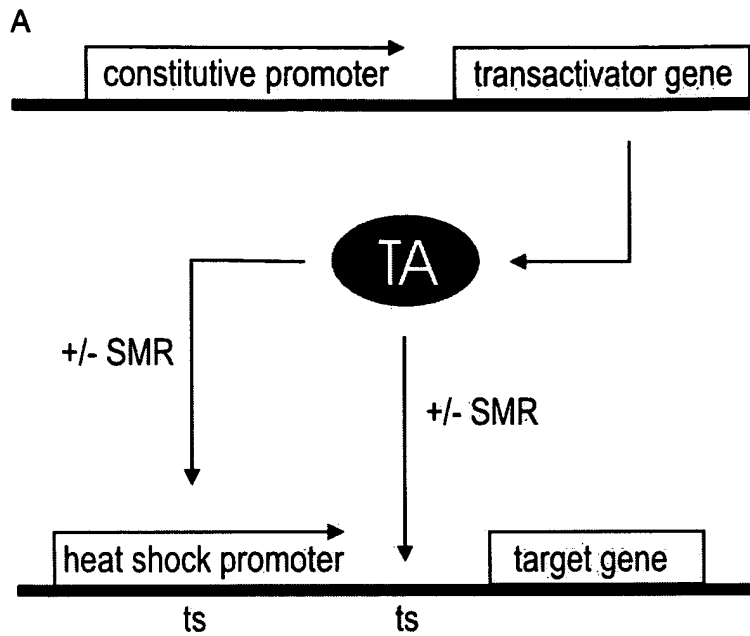
- tandem or hybrid promoters
-

A

Ad ┤glvp-r promoter ┃E1A┃ E1B   E2 ┃hsp70B - glvp-r promoter┃ ┃transactivator gene┃   E4

+ Mifepristone

+ Mifepristone

GLVP

B

Ad ┤glvp-r ┃E1A┃ E1B   E2   E3   ┃E4┃ glvp-r├

+ Mifepristone

+ Mifepristone

GLVP

+ Mifepristone

Ad ┃hsp70B - glvp-r promoter┃ ┃glvp gene┃   E2   (E3)

C

Ad ┤glvp-r ┃E1A┃ E1B   E2   E3   ┃E4┃ glvp-r├

+ Mifepristone

GLVP

+ Mifepristone

+ Mifepristone

+ Mifepristone

Ad ┃glvp-r┃ ┃passenger gene┃   ┃hsp70B - glvp-r┃glvp gene┃   E2   (E3)

glvp-r - GLVP-responsive promoter
Ad   - adenovirus DNA
( )   - gene region from which sequences can be optionally deleted
hsp70B - glvp-r promoter   - tandem or hybrid promoters

A

constitutive promoter   transactivator gene

TA

+/- SMR   +/- SMR

heat shock promoter   target gene
        ts   ts

B

constitutive promoter   transactivator gene

TA

+/- SMR

partial ts - heat shock   target gene
        promoter

ts   - transactivator - binding site
SMR   - small molecule regulator
TA   - transactivator protein
partial ts - heat shock promoter   - hybrid promoter co-activated by TA and
                                        endogenous HSF

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CACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAAGGGAATAAGGGCGACACGGA
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GGATACATATTTGAATGTATTTAGAAAAATAAACAAATAGGGGTTCCGCGCACATTTCCCCGAAAAGTGCC
ACCTGACGTC